

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ASML NETHERLANDS B.V., EXCELITAS TECHNOLOGIES CORP.,  
and QIOPTIQ PHOTONICS GMBH & CO. KG,  
Petitioner,

v.

ENERGETIQ TECHNOLOGY, INC.,  
Patent Owner.

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Case IPR2015-01277  
Patent 8,309,943 B2

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Before SALLY C. MEDLEY, JONI Y. CHANG, and  
BARBARA A. PARVIS, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
*37 C.F.R. § 42.108*

I. INTRODUCTION

*A. Background*

Petitioner, ASML Netherlands B.V., Excelitas Technologies Corp., and Qioptiq Photonics GmbH & Co. KG, filed a Petition (Paper 4, “Pet.”) requesting that we institute an *inter partes* review of claims 1, 3, 13, and 16 (“the challenged claims”) of U.S. Patent No. 8,309,943 B2 (Ex. 1001, “the

'943 Patent"). Patent Owner, Energetiq Technology, Inc., did not file a Preliminary Response. We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted "unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a).

Petitioner asserts the following grounds of unpatentability (Pet. 12, 34, 46):

References	Basis	Claims challenged
Gärtner <sup>1</sup>	§ 103(a)	1, 3, 13, and 16
Gärtner and Hiura <sup>2</sup>	§ 103(a)	1, 3, 13, and 16
Gärtner and Ikeuchi <sup>3</sup>	§ 103(a)	1, 3, 13, and 16

For the reasons that follow, we institute an *inter partes* review of each of the challenged claims of the '943 Patent.

#### *B. Related Proceedings*

Petitioner and Patent Owner identify, as related proceedings, a lawsuit in the United States District Court for the District of Massachusetts captioned *Energetiq Tech., Inc. v. ASML Netherlands B.V.*, Case Number 1:15-cv-10240-LTS. Pet. 1; Paper 7, 2. Petitioner and Patent Owner also indicate that other *inter partes* review petitions have been filed for patents

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<sup>1</sup> French Patent Publication No. FR2554302A1, published May 3, 1985 (Ex. 1003) ("Gärtner"). Unless otherwise noted, citations are to the certified English-language translation, submitted as part of Exhibit 1003.

<sup>2</sup> U.S. Patent Publication No. US 2005/0225739 A1, published Oct. 13, 2005 (Ex. 1004) ("Hiura").

<sup>3</sup> Japanese Patent Publication No. JP2003-317675, published Nov. 7, 2003 (Ex. 1005) ("Ikeuchi"). Unless otherwise noted, citations are to the certified English-language translation, submitted as part of Exhibit 1005.

that relate to the '943 Patent as follows: IPR2015-01279, IPR2015-01300, IPR2015-01303, IPR2015-01362, IPR2015-01368, IPR2015-01375, IPR2015-01377, IPR2016-00126, and IPR2016-00127. *Id.*; Paper 7, 3, Paper 12, 3.

*C. The '943 Patent*

The '943 Patent relates to a laser-driven light source. Ex. 1001, 1:15–16. Figure 1 of the '943 Patent is reproduced below.

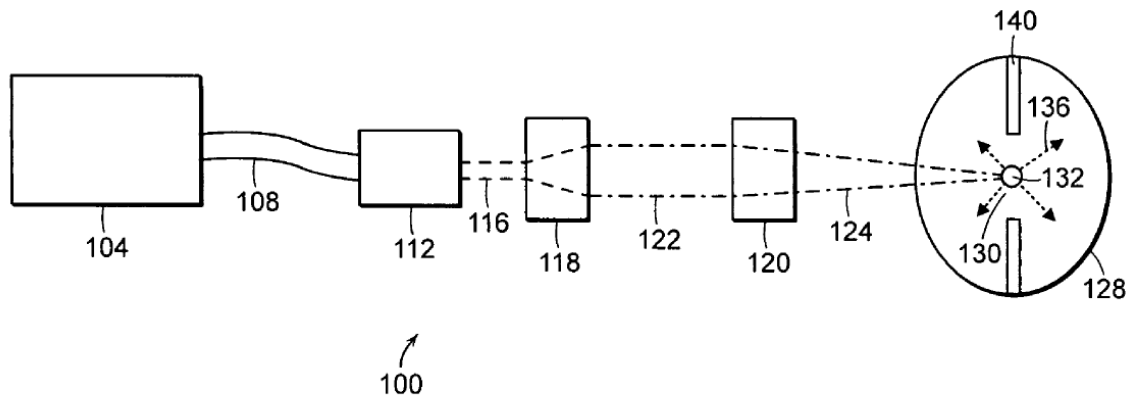


FIG. 1

Figure 1 illustrates a block diagram of a light source.

As shown in Figure 1, light source 100 includes laser 104 (*id.* at 11:22–24), chamber 128 that contains an ionizable medium (*id.* at 11:15–17), and ignition source 140 (*id.* at 12:17–19). Ignition source 140 generates an electrical discharge in region 130 of chamber 128 to ignite the ionizable medium (*id.* at 11:19–22), which creates plasma 132 (*id.* at 11:18–20). Laser 104 outputs laser beam 116 via fiber optic element 108. *Id.* at 12:3–4. Collimator 112 directs laser beam 116 to beam expander 118, which produces laser beam 122 and directs it to optical lens 120. *Id.* at 12:8–12. Optical lens 120 focuses the beam to produce smaller diameter laser beam

124 and directs it to region 130 (*id.* at 12:12–14) to emit high brightness light 136 (*id.* at 11:22–25).

*D. Illustrative Claims*

Of the challenged claims, claims 1 and 13 are independent. Claims 3 and 16 depend, directly, from claims 1 and 13, respectively. Independent claim 1 and dependent claim 3 are illustrative and are reproduced below.

1. A light source, comprising:
  - a chamber;
  - an ignition source for ionizing a medium within the chamber;
  - a laser for providing energy to the ionized medium within the chamber to produce a light; and
  - a blocker suspended along a path the energy travels and blocking the energy provided to the ionized medium that is not absorbed by the ionized medium.

Ex. 1001, 30:35–43.

3. The light source of claim 1, wherein the blocker absorbs the energy provided to the ionized medium that is not absorbed by the ionized medium.

*Id.* at 30:46–48.

*E. Claim Construction*

*1. Legal Standard*

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC.*, 793 F.3d 1268, 1277–1279 (Fed. Cir. 2015) (“Congress implicitly approved the broadest reasonable interpretation standard in

enacting the AIA,”<sup>4</sup> and “the standard was properly adopted by PTO regulation.”). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

### 2. *Summary of the Petitioner’s Contentions*

Here, Petitioner proposes a construction for “light source.” Pet. 7–9. Upon review of the present record, we determine that Petitioner’s proposed construction for “light source” is consistent with the broadest reasonable constructions of this term. For purposes of this Decision, for term “light source,” we adopt the following claim construction: “a source of electromagnetic radiation in the extreme ultraviolet (10 nm to 100 nm), vacuum ultraviolet (100 nm to 200 nm), ultraviolet (200 nm to 400 nm), visible (400 to 700 nm), near-infrared (700 nm to 1,000 nm (1  $\mu$ m)), middle infrared (1  $\mu$ m to 10  $\mu$ m), or far infrared (10  $\mu$ m to 1000  $\mu$ m) regions of the spectrum” (Pet. 8–9).

### 3. “*a blocker*”

For purposes of this Decision, we find it necessary to construe the claim term “a blocker” expressly. Claim 1 recites “*a blocker* suspended along a path the energy travels and blocking the energy provided to the ionized medium that is not absorbed by the ionized medium.” Ex. 1001,

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<sup>4</sup> Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”).

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